In the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application. Please cancel claims 1-36 without prejudice to or disclaimer of the subject matter therein. Please add new claims 37-58. No new matter has been added.

Claims 1-36 (Cancelled)

37. A device, comprising:

a mass;

an actuator configured to vibrate the mass; and

a coupling disposed between the actuator and the mass or between the mass and a housing, the coupling having a first configuration with a compliance and a second configuration with a compliance, the compliance of the coupling in the first configuration being different from the compliance of the coupling in the second configuration, the actuator being configured to output haptic feedback associated with the first configuration of the coupling and haptic feedback associated with the second configuration of the coupling, the haptic feedback associated with the first configuration of the coupling being different from the haptic feedback associated with the second configuration of the coupling.

38. The device of claim 37, wherein the coupling includes a magnetic spring disposed between the actuator and the mass.

39. The device of claim 37, further comprising a pivotable member coupled to the mass, the pivotable member including at least one magnet that is configured to be moved by a magnetic field of the actuator.

40. The device of claim 37, wherein the coupling is a flexure disposed between the mass and the housing.

41. The device of claim 1 wherein the actuator is mechanically grounded to the housing and is configured to move the mass, the mass including a magnet.

42. The device of claim 37, wherein the actuator includes a first mechanically grounded actuator and a second mechanically grounded actuator, the second actuator configured to provide a magnetic force on the mass to provide a variable tension in the coupling.

43. The device of claim 37, wherein the coupling includes a flexible member coupled to the mass and the housing, the actuator being configured to move the mass via a magnetic field.

44. The device of claim 37, the actuator being a first actuator, the device further comprising a second actuator, the coupling being a tapered member having a centerline axis, the tapered member being coupled to the second actuator, the second actuator being coupled to the housing, the second actuator being configured to rotate the tapered member about its centerline axis to switch between its first configuration and its second configuration.

45. The device of claim 37, the coupling being a flexible member, wherein a compliance of the flexible member is configured to be varied by moving at least two grounded pincher rollers, the pincher rollers having a first position and a second position along a length of the flexible member, the first configuration of the flexible member being associated with the first position of the at least two grounded pincher rollers, the second configuration of the flexible member being associated with the second position of the at least two grounded pincher rollers.

46. The device of claim 45, the actuator being a first actuator, further comprising a second actuator, the second actuator being configured to move the at least two grounded pincher rollers.

47. The device of claim 37, wherein the device is a gamepad controller, the gamepad controller being configured to receive a signal from a host computer, the haptic feedback being output based on the signal, the signal being based on events occurring within a graphical environment implemented and displayed by the host computer.

48. An apparatus, comprising:

a rotary actuator having an axis of rotation;

an eccentric mass configured to be rotated by the rotary actuator about the axis of rotation in one of a first rotary direction and a second rotary direction opposite the first rotary direction,

the eccentric mass having a first configuration with an eccentricity relative to the axis of rotation and a second configuration with an eccentricity relative to the axis of rotation; and

the rotary actuator is configured to output, in response to a drive signal, a first haptic sensation when the eccentric mass is in its first configuration and a second haptic sensation when the eccentric mass is in its second configuration, a magnitude of the first haptic sensation being different from a magnitude of the second haptic sensation.

49. The device of claim 48, further comprising a circuit configured to send the drive signal to the rotary actuator.

50. The device of claim 48, wherein the eccentric mass includes a plurality of discs coupled to a rotating shaft, the rotating shaft being coupled to the rotary actuator, the plurality of discs being responsive to a magnetic field, the magnetic field being operative to cause at least one disc from the plurality of discs to frictionally engage with the rotating shaft while the eccentric mass is in its first configuration.

51. The device of claim 50, the actuator being a first actuator, further comprising a second actuator including a coil, a core, and a magnet, a first end and a second end of the core being provided on either end of the rotating shaft, the magnet being rigidly coupled to the rotating shaft, at least one disc from the plurality of discs being configured to engage the magnet, the second actuator configured to provide the magnetic field.

52. The device of claim 48, wherein the eccentric mass includes a slotted member defining a first slot extending from a center aperture and a second slot extending from the center aperture, the first slot having a length and the second slot having a length different from the length of the first slot, the rotary actuator having a spindle configured to engage one of the first slot and the second slot, the eccentric mass having an eccentricity associated with the spindle engaging the first slot and an eccentricity associated with the spindle engaging the second slot, the eccentricity of the mass associated with the first slot being different from the eccentricity of the mass associated with the second slot.

53. The device of claim 52, wherein the spindle is coupled to a centering platen, the centering platen is configured to be move moved by the rotary actuator toward the slotted member, the slotted member is configured to move in response to the centering platen such that

the spindle is positioned in a center aperture of the slotted member, the spindle is configured to engage a different one of the first slot and the second slot in response to the slotted member being rotated.

54. The device of claim 48, wherein the mass includes a ring magnet coupled to a hub, a first magnetic field being provided to move the ring magnet to a position relative to the axis of rotation and relative to the hub, a second magnetic field being provided to move the ring magnet to a position relative to the axis of rotation and relative to the hub and different from the position of the ring magnet associated with the first magnetic field, the first configuration of the eccentric mass being associated with the first magnetic field, the second configuration of the eccentric mass being associated with the second magnetic field.

55. The device of claim 48, wherein the mass includes a hopper configured to enclose a plurality of balls, an inlet to the hopper is openable selectively to modify a number of balls from the plurality of balls inside the hopper, the first configuration of the eccentric mass being associated with a distance between a center of mass of the hopper and the axis of rotation for a first number of balls in the hopper, the second configuration of the eccentric mass being associated with a distance between a center of mass of the hopper and the axis of rotation for a second number of balls in the hopper, the second number of balls being different from the first number of balls.

56. The device of claim 55, wherein the hopper defines an outlet configured to allow at least one ball from the plurality of balls to exit the hopper, the outlet being controllable separately from the inlet.

57. The device of claim 48, wherein the eccentric mass includes a rotating disc defining a plurality of sockets, at least one ball is configured to be attracted to one of the sockets from the plurality of sockets by a selectively actuated magnetic field, the first configuration of the eccentric mass being associated with a distance between a center of mass of the rotating disc and the axis of rotation for a first ball-socket combination, the second configuration of the eccentric mass being associated with a distance between a center of mass of the hopper and the axis of rotation for a second ball-socket combination, the second ball-socket combination being different from the first ball-socket combination.

58. The device of claim 57, wherein the at least one ball is one of a plurality of balls provided in a groove.